

THE CALIFORNIA VETERINARIAN



NOVEMBER—DECEMBER
1948

Christmas Greetings



Dear Doctor,

This Christmas, the California State Veterinary Medical Association is happy to extend to you an application for membership in our Association. If you will fill in and mail us the form below, your name will be brought up at our Mid-Winter Conference, San Luis Obispo, January 10, 11, and 12, and upon the approval of our membership, your membership in your State's Association will be attained for the New Year.

Very truly yours,

CHARLES S. TRAVERS,
Secretary, CSVMA,
3004 16th St., San Francisco 3, Calif.

Christmas Application -- 1948

I hereby make application for membership in The California State Veterinary Medical Association.

I am a graduate of..... College, year.....

I am..... year of age, a native of.....

I promise, if elected to membership to abide by the Constitution and By-Laws of your Association, and will ever strive for the advancement of the profession.

Signed.....

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.....

Application MUST be accompanied by one year's dues.

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*Edmonds, E. V., *Veterinary Medicine* (in press)

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THE CALIFORNIA VETERINARIAN

NOVEMBER-DECEMBER, 1948

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HISTORICAL REVIEW OF THE CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION

By JOSEPH ARBURUA, D.V.M.

(Continued from Last Issue)

During the year 1889 the committee appointed at the first annual meeting to draft a bill to regulate veterinary practice in the state, was unable to present one that was acceptable to the members. The difference of opinion between the qualified (graduates) and the non-graduates was at such variance that no agreement was reached.

Nevertheless the association continued to grow and expand, becoming a statewide organization in fact, as evidenced by an account of the second annual meeting.

This meeting convened in San Francisco in December, 1889, on Wednesday and adjourned at the end of the same day to meet the following evening, for a two-day meeting, in the office of the "Rural Californian," in Los Angeles.

This meeting was the first Southern meeting and the membership was augmented by the admission of several Southern veterinarians. These were: Blackinton (Ont.), F. C. Pierce (Chicago), W. J. Oliver (Chicago), J. K. Witherspoon (non-graduate) of Los Angeles and W. B. Rowland (Amer.) of Pasadena. This brought the membership to 22 with seven representing Southern California.

From a newspaper clipping concerning this meeting we learn that a local veterinary association which met quarterly, was organized in Los Angeles in May, 1889. The official name of this association is not given but it is presumed that this was the old Southern California Veterinary Medical Association. Its first officers were Drs. Rowland, President; Whittlesey, Vice President; and Morrison, Secretary Treasurer. All of its members were taken into the California State Association. It will be remembered that Drs. Rowland and Morrison were already members.

The third annual meeting held December 12, 1890, in Sacramento, was highlighted by an address by Governor George Markham, showing that the association was accumulating prestige. The Governor's address was responded to by Dr. Spencer. Spencer's response written in longhand by himself is one of the treasures of his album.

In 1891 the first effort was made to have a State Practice Act enacted. This bill known as the Williams Veterinary Bill, however, was sponsored by a group of non-graduate practitioners and was unacceptable to the association, and therefore did not get its support. There were, at this time, about 100 men practicing veterinary medicine in the State, of whom less than 25 per cent were college graduates. Many of the unqualified men were politically strong in their respective commu-

nities. Fearing they would be denied the privilege of following their trade, naturally they were not willing to support restrictions relating to their behavior and livelihood and saw to it that any proposed legislation would protect them. The bill did not pass the legislature. It is interesting to note what, at least one of the legislators, thought of the veterinarian. In opposing this bill the solon remarked "All veterinarians are nothing but veterinary cranks. A veterinary surgeon is nothing but a man who has not the ability to become a medical man."

For this remark the Senator received a sound verbal castigation from President Maclay at the fourth annual meeting which was held at the Hotel Baldwin in San Francisco, December 9, 1891. Though unsuccessful in securing recognition and protection for the qualified veterinarian, it appears that at this point the association was riding on the crest of the wave of success. The program was replete with good papers and attendance was good, reflecting much enthusiasm.

According to the clipping the annual banquet was held at the Maison Riche and the "menu was most elegant and costly." W. F. Egan was the toastmaster, giving a toast to "Our Profession" which was responded to by Dr. Maclay. Many toasts and speeches were offered and amusing stories were told. The great Chinese interpreter, Robert Mitchel, the baritone, F. H. Belcher, and Dr. Maclay entertained the group with solos, duets and trios. The party finally broke up singing "Auld Lang Syne" and we opine it must have been a gala affair.

New officers replaced those who had been in the chair for three years. Morrison was made President, Egan, Vice President, R. A. Archibald of Sacramento, Secretary, and Orvis, Treasurer.

During the year Dr. Woodruff had passed away. It will be remembered that he had been treasurer (1889-91) of the association. This was the first member to be lost by death.

Quarterly meetings had been held regularly since the organization of the association. These meetings were held in the Northern California cities of San Francisco, Stockton, San Jose and Sacramento as these were the only ones large enough to support more than one qualified veterinarian. The custom of holding the quarterly meetings in the North continued but on December 14, 1892, the fifth annual meeting was held in Los Angeles. This was the second meeting to be held in the South. Thereafter the annual meetings were held North and South in alternate years.

EQUINE PRACTICE ON BREEDING FARMS.

III. BREEDING PHYSIOLOGY*

By B. J. ERRINGTON, D.V.M., Arcadia, Calif.

Veterinarians have been able to increase the breeding efficiency of mares by personal observation of the symptoms of estrus; by vaginal examination to detect estrus of irregular mares; by making early pregnancy examinations; and by keeping complete breeding records.

Irregular Estrus

A large percentage of mares are irregular in their estrual periods. Some may not show symptoms of estrus to a teaser even though all other symptoms are normal. Some foaling mares will not show symptoms of estrus after they have been bred in their foaling heat (horsemen call these "every-other-year breeders"). Some show false symptoms of heat in diestrus. Some have short periods, while others show symptoms for several weeks.

Mares usually show the same type of peculiarity in their estrus periods each year, although they may differ as barren mares from when nursing a foal. For this reason it helps to have had experience with a mare in preceding years in order to know what may be expected of her. Veterinarians have the advantage of being able to interpret these irregularities, especially if they have close supervision of the breeding activities.

Because of these irregularities, the greatest difficulty in getting mares in foal seems to be in breeding them at the proper time in relation to ovulation. Breeding at the proper time is not the entire solution, as many mares have been bred repeatedly throughout estrual periods without conceiving; however, there is an optimum time to breed most mares. No doubt this varies in different mares.

Breeders usually try to have their mares covered on a particular day of the period, depending on past experiences. It is frequently difficult to determine the exact day a mare comes in estrus, or how long she will remain in estrus.

Semen Survival

It is commonly considered that most stallion sperm will survive for approximately thirty hours in the genital tract of mares, but if the tract is not entirely normal the survival time will be shorter. Day (England) reports that in some cases spermatozoa survive for six days and that fertility is fairly high during this time. This would seem longer than usual from the experience of the practical breeder. There is general agreement that the spermatozoa must be in the genital tract of the mare before ovulation occurs in order for fertilization to result.

There is no way of telling how long a mare will remain in estrus except from previous

experience with her. The average period is shorter in the latter part of the breeding season, which is probably one reason that a higher percentage of mares get in foal at this time. The best that one can do, then, is breed at a predetermined day, to breed at a different time in the period if it has been difficult to get a mare in foal, or possibly to give more than one cover if the mare remains in heat longer than expected.

Ovulation

Most breeders believe, from practical experience, that mares are more apt to get in foal when bred toward the end of the estrual period. Those men¹ who have studied the ovulation time in relation to the estrual period by palpation of the ovary per rectum, find that there is a more constant relation between ovulation and the cessation of heat, than between ovulation and the appearance of heat. Ovulation usually occurred during the last one or two days of estrus and rarely more than three days before the end of estrus.

Caslick,² who followed the estrual period by observing the changes in the vagina, and studied a large number of breeding records, found that the highest percentage of pregnancies occurred in mares bred on the second and third day of estrus. This is as would be expected of mares with normal estrus. It is the common practice in horse-breeding centers to breed on the second or third day of estrus and records indicate this to be the advisable procedure. It is with the irregular mares that a veterinarian is greatly concerned. They are individual problems and their history and symptoms must be studied carefully.

The practice of determining the ovulation time by palpation of the ovaries is not commonly used by practicing veterinarians, as it has more limitations than vaginal examination for determining the proper time to breed mares that show irregular estrus. There are but few mares in which the estrual changes in the vagina and cervix cannot be interpreted. Also, there are but few mares, who do not show symptoms of estrus to a teaser, in which an estrual period can not be found within 31 days simply by vaginal examination. The vaginal changes are of sufficient duration in estrus that mares can be bred either early or late in the period if desired.

*This is the third of a series by Dr. Errington. The fourth and final article will be published in a subsequent issue.

¹Andrews, F. N. and F. F. McKensie; Estrus, ovulation and related phenomena in the mare. *Bul. 329, Univ. Missouri*, May, 1941.

²Caslick, E. A.; The sexual cycle and its relation to ovulation with breeding records of the Thoroughbred mare. *Cornell Vet.* 1937, 27, 2.

Mid-Winter Conference at San Luis Obispo January 10, 11, 12

California State Polytechnic College Host to Conference

California State Polytechnic College in San Luis Obispo, the school where students "learn by doing," will open its 2,000-acre campus again on January 10, 11 and 12 for the annual Mid-winter Conference of the California State Veterinary Medical Association.

California veterinarians who have attended previous conferences at the college are familiar with its sprawling campus and its variety of features, a unique combination of corrals and machine shops, chemistry labs and cow barns, turkeys and airplanes.

The college is located on the northern edge of San Luis Obispo, a county seat town of 15,000 persons located just halfway between Los Angeles and San Francisco. The old Spanish town, whose mission was founded in 1777, is served by the coast line of the Southern Pacific Railroad. Southwest Airways main-

tains regular flight service to and from the city. El Camino Real, highway 101, the famed "route of the kings," also passes through the city.

Students in all divisions are taught skills which will prepare them to fill jobs when they leave school. The curriculum is slanted toward job-getting training. The school's "upside down" plan gives the student training in job skills during the first two years of his college program. Background courses in liberal arts are taken during the final two years of college.

Students at the school who finish a four-year course receive a bachelor of science degree. Students who do not choose to go to school for four years may take a two-year vocational course or a three-year technical course.

McPhee Extends Welcome

It is a pleasure each year to welcome member of the California State Veterinary Medical Association to the campus of California State Polytechnic College. Veterinarians who have attended previous conferences will be familiar with the campus, but they will find more students than ever, the largest faculty in the history of the college, and expanding facilities for the larger staff and student body.

The college is proud to have the state's veterinarians visit its plant each year. The visit is one of the connecting links between the college and professions which contributes to the school's philosophy of vocational education. Out of the college's Agricultural Division each year come students whose careers in the animal field frequently bring them in contact with veterinarians.

May I extend my warmest personal wishes for a successful conference and a pleasant visit at the college.

Sincerely,

JULIAN A. MCPHEE, President,
California State Polytechnic College.

Women's Auxiliary to Meet

Mrs. Charles H. Reid, President of the Women's Auxiliary of the California State Veterinary Medical Association, has called a meeting of her group to be held in conjunction with the CSVMA's Mid-Winter Conference, San Luis Obispo, January 10, 11 and 12.

In addition to the splendid program arranged for her organization there will be the usual business meeting to be held in the Recreation Room of California State Polytechnic College at 2 o'clock, Tuesday afternoon. We hope to see all of the members there!

Transportation to Mid-Winter Conference

San Luis Obispo, January 10, 11 and 12

The Convention City, San Luis Obispo, is on the main line of the Southern Pacific and directly in the path of some of the finest trains in the United States.

Of these the *Morning* and *Noon Daylights* deserve special mention as they are particularly adaptable to this convention.

The following Southern Pacific representatives have made special arrangements for you: San Francisco—Mr. E. H. Hagaman. Phone DOuglas 2-1212, Ext. 2583.

Oakland—Mr. E. Milliken. Phone TEmplebar 2-2121, Ext. 4172.

Los Angeles—M. W. Sidle. Phone MICHigan 6161, Ext. 2704.

San Diego—M. L. Adler. Phone MAIn 7111.

We suggest you make reservations as early as possible with one of these gentlemen or if you are not located in one of the areas mentioned, the nearest Southern Pacific Agent will be glad to help you.

Your secretary has made arrangements with Mr. Jack White of the Anderson Hotel, and L. Wilson Trahin, Manager of the Chamber of Commerce of San Luis Obispo, to take care of your reservations.

Please make reservations at your earliest convenience. Give the number in your party, type of rooms desired, and arrival time. Send a \$5.00 deposit.

Your Program Committee under Chairman Floyd H. White has arranged an excellent three-day meeting; and you should make every effort to attend.

Let us make this 1949 Mid-Winter Conference a huge success. If there is anything your secretary may be able to do for you, do be sure to call upon him.

THE CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION

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Director of the George Williams Hooper Foundation for Medical Research, University of California's San Francisco Campus. Banquet Speaker.



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New York City Practitioner, President-Elect American Veterinary Medical Association.

PROGRAM COMMITTEE

Chairman Floyd White, 3rd and Grand Ave., San Rafael.

Dean C. Lindley, 67 Benton Way, San Luis Obispo.

Fred Pulling, Jr., Box 608, Atascadero.

M. A. Thom, 959 South Raymond, Pasadena 2.

O. W. Schalm, 230 Cambridge, Berkeley.

Rex Taylor, 1800 N. 4th St., San Jose.

C. D. Stafford, P. O. Box 2, Novato.

REGISTRATION

Monday, January 10, 1949

9:00 A.M. to 12:00 Noon

EXECUTIVE COMMITTEE MEETING

Monday, January 10, 1949

9:00 A.M.

SPECIAL LECTURES

W. A. McDonald, Bureau of Animal Industry, Sacramento, Calif., "Cooperative Problems in the Veterinary Profession"

Dean R. E. Nichols, College of Veterinary Science, State College of Washington, "Practical Treatment of Fractures in Small Animals"

"Digestive Physiology of the Rumen"

Dr. Joseph B. Swim, Toxicologist to the Coroner of the City and County of San Francisco, "Blunders in Medico-Legal Testimony"

Otto Stader, Practitioner, Ardmore, Pennsylvania, "Surgical Problems of the Canine Knee Joint"

W. A. Young, Treasurer of the AVMA, Managing Director of the Anti-Cruelty Society of Chicago, "Discussion of Practical Humane Work"



JULIAN MCPHEE

President of California State College, has again visited the State Veterinary Medical Association to hold its Mid-Winter Conference on the campus of the State Agricultural Engineering College in San Luis Obispo.



ADMINISTRATION BUILDING, CALIFORNIA STATE VETERINARY MEDICAL ASSOCIATION

AL ASSOCIATION MID-WINTER CONFERENCE

UARY 10-11-12, 1949

o be held at the California State Polytechnic College



GEORGE H. HART

Dean of Veterinary Science of the College of Agriculture of the University of California.



R. E. NICHOLS

Dean of the College of Veterinary Medicine of the Washington State College.



McPHEE

a State Polytechnic
ited the California
ical Association to
Conference on the
s Agricultural and
n San Luis Obispo.

C. P. Zepp, Practitioner, New York City, N. Y., President-Elect, AVMA, "The Diagnosis and Treatment of the Diseases of the Ear of the Dog and Cat Including Surgery"

"Obstinate Skin Disease in Small Animals"

E. M. Dobbs, Deputy Live Stock Inspector, Los Angeles County. To discuss the Farm Bureau Mastitis Control Project in Los Angeles County.

O. W. Schalm, Division of Veterinary Science, University of California, Berkeley, will discuss Dr. Dobbs' paper.

George H. Hart, Dean Veterinary Science, College of Agriculture, University of California, "Sex Hormones as Therapeutic Agents"

"Coordination of Veterinary Science in California"

Theodor K. Brunner, Swiss Veterinarian with Dr. Meyer at the Hooper Foundation, will discuss Leptospirosis with illustrations.

PANEL DISCUSSIONS

"Sterility of Cattle" led by Charles D. Stafford, Practitioner, Marin County, Calif.

"Business Methods in Small Animal Hospitals," led by Myron Thom.

BANQUET

Karl F. Meyer, Hooper Foundation, Banquet Speaker.

J. L. Tyler, Life Member California State Veterinary Medical Association, Toastmaster.

TUESDAY

(Morning and Afternoon)

Large and small animal sections will be held.



CA STATE POLYTECHNIC COLLEGE

BRUCELLOSIS ERADICATION*

By A. K. KUTTLER, D.V.M., In Charge, Tuberculosis Eradication Division,
U. S. Bureau of Animal Industry

(Condensed)

PART I

Brucellosis has been one of our most difficult problems for many reasons, all of which we should fully understand if we are to overcome them. Our splendid record of livestock disease control is unequalled by any other country, and has been sound economically. We have dealt with seemingly very difficult problems through study, including controlled experiments, followed by adherence to the plan considered best until the disease was eradicated or successfully controlled.

However, no single plan of attack on brucellosis has proved successful under all conditions. Leaders in livestock disease control have found it difficult to adjust to this situation, and too often tended to explain only one favored plan to the owner. When the owner then talked to another veterinarian who preferred another plan, confusion was inevitable. We must make all the information we have available to the owner, and let him help decide which plan best suits his peculiar circumstances. Nothing will do more to enlist his cooperation than having him feel that he has a full share in the project.

Ever since we started on a nationwide brucellosis control program, the country has been in one emergency or another. First it was a surplus, and then before we could apply the brakes it was a scarcity. The surplus, we realize, was more a matter of distribution than numbers, as the shortage is a result of increased demand rather than fewer cattle.

During the surplus, we had the largest number of regularly employed veterinarians in history; but the heavy losses from brucellosis, and the confidence established by past successes, caused livestock owners to come to us in greater numbers than could possibly be cared for.

As the surplus rapidly became a scarcity, we also found ourselves with the most serious shortage of veterinarians we have ever experienced in a livestock disease eradication project. Meanwhile the best food-production and conservation campaign ever organized began, stressing brucellosis eradication. More and more producers demanded service, and our efforts were spread entirely too thin; in too many cases we did not follow through.

During both surplus and scarcity, the interchange of cattle was accelerated. This continuous shifting and intermingling is one of the most serious obstacles to disease eradication, but with a steady increase in sales yards, truck and even air transportation, is no doubt here to stay.

Our greatest difficulty, however, arose from

confusion, due largely to failure to reach nationwide agreement on control procedures. Past successes were due to the cooperation of all concerned; but instead of getting together on this most difficult problem, we too often indulged ourselves in criticizing each other.

If we are to keep our leading position in the field of disease control, we must all be willing to accept the basic principles to which we adhered in the past: (1) love for the facts; (2) determination to know the facts; (3) willingness to examine the information made available through research and its practical application in the field; (4) full acceptance of the facts, regardless of former opinions.

Following are some of the facts:

1. Brucellosis can be economically eradicated from any herd, if the procedures most suitable in the particular circumstances are followed through under the direction of men trained in livestock disease control, and if the owner or caretaker gives full cooperation.

Since brucellosis can be eradicated from a single herd, it can, by applying the same principles, be eradicated from an area.

2. No livestock disease has ever been controlled until the carriers have been destroyed or properly restricted in movement. Therefore, permanent identification and quarantine or slaughter of infected cattle is a basic requirement of any control project. Neglect of this measure eventually spreads rather than controls the disease.

3. The demand for eradication or control must come from the producers themselves. There is such a demand for brucellosis eradication; however we have always had more counsel from producers before adopting other programs than has been the case when we were considering brucellosis eradication procedures. We must have the producers, agricultural leaders, and public health leaders, in our councils; because we without them, and they without us, are lost.

4. An attack of brucellosis usually results in heavy loss, regardless of any subsequent assistance we can give. We must therefore prevent the attack. This means locating the infection before conditions favoring its spread arise; and for this we must rely on the agglutination test.

5. Brucellosis is a deceptive disease, and its self-limiting nature is readily misinterpreted. More misinformation has been disseminated about brucellosis than about any other disease we have undertaken to eradicate.

6. Strain 19 vaccine produces serviceable resistance in most calves, and softens the attack in others.

*Presented before the Midwinter Conference of the CSVMA.

7. We have always had to continue our control efforts long after the owner felt that the disease was eliminated from his herd. The expense of the program, except for handling the cattle, should not be placed on the owner, lest he decide to discontinue before eradication is really complete.

8. The infected cow or heifer is the principal source of infection, and is most dangerous when calving or aborting. Milk from infected cows may contain brucella.

9. No successful treatment has been found.

10. The agglutination test is an accurate but not perfect diagnostic method.

11. Heifers under ten to twelve months old are resistant, but become susceptible as they reach breeding age. During pregnancy and lactation, infection is easy.

12. Heifers six to eight months old usually develop good resistance but not complete immunity after vaccination with Strain 19. This resistance decreases somewhat with time. A few vaccinated heifers may become permanent reactors.

13. Non-infected heifers of breeding age, and cows, also develop marked resistance after vaccination, but many become permanent reactors.

14. There is now no method of differentiating vaccine reactions from those due to natural infection, but experimental work now under way is encouraging. Such a method would remove a great barrier to vaccination.

15. Vaccination has not been shown to have curative value.

16. All available evidence indicates that vaccination with Strain 19 does not cause a transmissible infection.

There is a shortage of veterinary personnel, and we do not use our limited forces to the best effect. In the last war we learned to concentrate our fire, yet we ask our veterinarians to cover more and more territory with consequent loss in effectiveness. In many areas, a different man did the follow-up work each time, which is doubly unsound. A veterinarian who cannot observe progress cannot sustain proper interest in the program; nor can he develop much interest in a community which is not his home and whose progress is not a personal concern.

The practicing veterinarian, on the other hand, is vitally interested, and will usually be there to enjoy success or endure failure. He must be incorporated in this work and given all possible assistance. The regularly employed veterinarian should do mostly supervisory work, but participate in all phases of the project when necessary.

(Continued Next Issue)

Were You One of the 13?

Since your last THE CALIFORNIA VETERINARIAN reached you 13 more health and accident claims have been settled.

APPLICATIONS FOR MEMBERSHIP

L. J. Bell, N. Sacramento—Vouchers: R. C. Goulding, Carl Sepponen.

L. I. Beller, Lynwood—Vouchers: H. I. Ott, C. H. Ozanian.

William Dungan, Petaluma—Vouchers: Mervyn Mahoney, Gordon Barr.

James Ebaugh, Gilroy—Vouchers: C. M. Stay, C. Edward Taylor.

V. I. Graff, Oakdale—Vouchers: A. T. Cook, R. A. Ball.

Neil Halpin, Santa Ana—Vouchers: H. I. Ott, Philip Olson.

Joseph Hicks, Aptos—Vouchers: C. C. Smith, J. W. Harrison.

Ross Hurt, Los Angeles—Vouchers: Charles Reid, Jesse Jones.

H. A. Janssen, Oakdale—Vouchers: A. T. Cook, R. A. Beck.

Melvin Marcus, Long Beach—Vouchers: D. K. Collins, Charles Reid.

W. A. McDonald, Sacramento—Vouchers: R. K. Allen, H. W. C. Lichtenwalter.

W. W. Putney, Studio City—Vouchers: C. H. Reid, H. I. Ott.

LeRoy Schafer, N. Hollywood—Vouchers: C. H. Reid, Philip Olson.

Velma Wodars, Goleta—Vouchers: C. H. Colton, T. F. Taylor.

A. H. Edmondson, Pasadena—Vouchers: N. L. McBride, Jr., Myron Thom.

David S. Clark, Hanford—Vouchers: H. S. Akin, I. G. LaRue.

THE CALIFORNIA CATTLEMEN

The California Cattlemen's Association held its annual convention in San Jose this year December 2, 3 and 4 and elected new officers as follows: Dave Smedden, President; Jere Sheldon, Vice-President; Jake Schneider, Vice-President; John Baumgartner, Jr., Vice-President; and L. Edgar Dick, Secretary.

It grieves us to report that Mrs. A. Mack Scott was stricken suddenly with sub-arachnoid hemorrhage October 28 after visiting friends and apparently in perfect health. Mrs. Scott has been hospitalized ever since that date and is still critically ill. The Mack Scotts were married a week after the AVMA meeting.

QUESTIONS AND ANSWERS

In 1949, we think it may be a good idea to establish a question and answer box in the magazine. Any questions you may wish answered direct to our office and we will print the question and answer (no names attached unless desired) in the next issue. Let us know what you think of this project with your own original questions.

Health Certificates for Interstate and Foreign Shipments

By ARTHUR G. BOYD, DVM, Assistant Chief, Division of Animal Industry,
California State Department of Agriculture

It has been our observation in the State Division of Animal Industry that veterinarians issuing health certificates covering interstate and foreign shipments of animals should exercise greater care in the preparation of these documents. Too often after engaging a veterinarian and paying a fee, the prospective shipper learns, to his amazement, that his efforts and expense have been in vain and the health certificate which he received is not "worth the paper it's written upon," because it does not conform with the requirements of the state, territory, or country of destination.

It is fully realized that busy practitioners and livestock and allied groups would rejoice if there were greater uniformity and less complexity in interstate regulations promulgated supposedly in the interest of animal health. Some of these regulations seem highly impractical and far-fetched, sometimes to the point of becoming trade barriers instead of trade stimulators; however, we must bear in mind that they are the law of the state of destination and must be complied with and cannot be waived by officials of the state of origin.

In California it has been the policy to issue official health certificate blanks for interstate and foreign shipments to veterinarians who have been designated jointly by the federal and state governments as authorized or authorized and accredited. Authorized veterinarians can issue health certificates for interstate shipments of livestock, but certificates for foreign shipments must be issued by an accredited veterinarian. Authorization is granted to licensed veterinarians upon application to the State Division of Animal Industry which, in turn, recommends the applicant to the U. S. Bureau of Animal Industry. Accreditation is obtained by passing a federal accredited examination. If such examination has been passed in another state, then accreditation may be granted in California on the basis of reciprocity.

Only two forms of official interstate health certificates are issued by the State, namely, D. A. I. Forms 10 and D. A. I. Forms 43. The D. A. I. Form 10, Certificate of Interstate Movement of Cattle, is to cover shipments of cattle and goats when a tuberculin test and/or agglutination test for Brucellosis are required. The D. A. I. Form 43, Livestock Health Certificate for Interstate Shipments, is for interstate movements of animals, including poultry, other than those covered by D. A. I. Form 10. These forms also are used for foreign shipments, the Form 10 for cattle and goats and the Form 43 for all other classes of livestock and poultry. Certificates are serially numbered for purpose of record.

Veterinarians agreeing to issue health certificates should ascertain the place of destination of shipment and then make it their responsibility to comply with the laws of that State.

How can the veterinarian obtain information concerning the requirements of the place of destination? Each authorized veterinarian should obtain a copy of the booklet known as Circular 1, Revised, entitled "Health Requirements Governing Admission of Livestock." This booklet contains the interstate health requirements of all the states and territories, also Canada. Certain changes, however, are made from time to time. A copy can be obtained by sending 57 cents to Dr. R. A. Hendershott, Secretary, U. S. Livestock Sanitary Association, 1 W. State Street, Trenton 8, N. J.

The State Division of Animal Industry, State Office Building No. 1, Sacramento (Telephone 2-4711, Local 422 or 425), maintains a current file of the various state requirements and will furnish this information upon request. As for foreign countries, the office of the United States Bureau of Animal Industry, Room 218, Federal Building, Sacramento (Telephone 3-2626), has information relating to requirements of most of the countries where shipments are usually sent. They do not have, however, current files on some foreign countries. The local consuls' offices of most foreign countries have full information concerning animal health requirements of the countries they represent, and whenever possible this source of information should be used. When the information is not available through these sources, then it becomes necessary to contact the United States Bureau of Animal Industry at Washington, D. C. for details.

We frequently have health certificates returned by livestock sanitary officials of other states because the certificates are not complete, unintelligible, or not on official forms. This situation sometimes results in great inconvenience and expense to livestock shippers. Some shipments are held up on the road until proper health information is furnished, and occasionally another veterinarian has to be engaged to complete the necessary health requirements. We hear complaints that veterinarians issued a health certificate but never even "looked at the animal." Should such complaints be justified, even to a very limited extent, it reflects on the good work of all conscientious veterinarians. There are some states that do not require a physical examination or observation in certain instances. For example, sometimes the only requirement is that the cattle be accompanied by a signed statement to the effect that they

originated in a Modified Accredited Tuberculosis-free Area. It is believed that some misunderstanding could be avoided if the veterinarian would take pains to explain that no observation of the animals was required.

It is a requirement of some states and most foreign countries that health certificates be approved by the state or federal livestock sanitary official in the state of origin. Instances have occurred where this requirement was overlooked and the error discovered just before shipment was to move, necessitating delay in shipping schedule or missing reserved transportation. One can readily appreciate the expense and inconvenience that is entailed in an instance where, due to a faulty health certificate, a boat scheduled for a foreign country is missed. Frequently reservations for livestock shipments must be made and paid for in advance and may require the construction of special pens or housing in the case of boat shipments. Then, again, there is the waiting charge for trucks that have been ordered to transport livestock.

Health certificates for dogs sometimes are returned from the state of destination of shipment because the veterinarian issuing the same fails to indicate that the animal, or animals, have been vaccinated against rabies or have originated in an area in which this disease has not existed for six months, etc., as the case may be, and are required by the regulations of the state involved. California's rabies law is under the jurisdiction of the State Department of Public Health, and to obtain information as to the occurrence of rabies in any area of the state one should communicate with either the State Department of Public Health, 760 Market Street, 1122 Phelan Building, San Francisco 2 (telephone Underhill 1-8700, Ext. 806) or with the local city or county health officer. Another reason why health certificates are returned and sometimes cause shippers inconvenience is that the writing is not legible, particularly the name of the city of destination, consignee's name and address, or description and identification of the animal.

Some states require, for all classes of livestock and other states for certain species, permits be obtained prior to movement in addition to shipment being accompanied by a health certificate. If this information is made available to the shipper by the veterinarian issuing the health certificate, then the proper permit could be applied for in advance and frequently avoid delays later when the shipper learns from other sources that such a permit is necessary. When health certificates, or accompanying laboratory test reports, indicate an animal intended for shipment in a given lot is a reactor or positive, and such findings render the animal ineligible for shipment, then the veterinarian issuing the certificate should strike out such animals and indicate "not to be included in shipment."

TWO NEW LOCAL ASSOCIATIONS

With an old "tried and true" adage in mind: in units rests strength, we are happy to announce the formation of two new local associations.

The Monterey Bay Area Veterinary Medical Association was formed, November 16, in Watsonville. The local veterinarians elected Dr. J. W. Harrison, their President, Dr. George Freilrmuth, their Vice-President, Dr. C. E. Taylor, one of their strongest supporters, promoters, and originators, as their Secretary-Treasurer. Their Executive Committee is composed of Dr. John E. Craige, and Dr. L. E. Chaney.

The Monterey Bay Area Veterinary Medical Association covers the counties of Monterey, Santa Cruz, and San Benito. For quite a long time the doctors in this area have been too far away to attend the East Bay meetings and this local organization takes care of their need to get together for the mutual benefit of all.

In San Francisco the San Francisco veterinarians have formed a group by that same name—The San Francisco Veterinarians. They are headed by Dr. M. A. Northrup, their President, Dr. T. M. McIntyre, their Vice-President, and Dr. H. F. Carroll, their Secretary. They have not established regular dates, but get together when they feel the need.

A letter was just received by your secretary from Doctors B. C. Watson and Walter W. Stiern representing the veterinarians of Kern County, and informing Mr. Travers of the Kern County veterinarians' plan for organizing a Veterinary Medical Association.

U. S. Public Health Service

Celebrated 150th Anniversary in July

The special interest of veterinary medicine in the notable celebration is that the U. S. Public Health Service now has a department engaged in the control of animal diseases, infectible arthropods, unwholesome food, and injurious plants related to public health, with a staff of competent veterinarians to direct its operations.

Founded as the Marine Hospital Service in 1798 to provide the Treasury Department with hospitals for its sailors, the U. S. Public Health Service so named since 1912, grew to a towering "Department of Health" famed around the world for its outstanding work, its generous gifts to medical science, its peerless research laboratory, and its capable personnel.

Based on the scientific background advocated by the better element of the commercial group, the bearing of the new service on livestock farming ought to further expose the fallacy of unscientific practices.

Dr. E. F. Sheffield, our Third Vice-President, has been appointed to fill the late Dr. Howard Robert's place on the Board of Examiners in Veterinary Medicine.

DOPING RACE HORSES*

By S. A. PEOPLES, *Professor of Comparative Pharmacology, Davis, California*

The different states use about the same methods for insuring that racehorses haven't been stimulated or depressed in any way. Usually the horse is kept in a paddock for about two hours before the race, and after the race urine and saliva samples are taken from the winner. In some states, the steward can select any horse he wants to for sampling.

In Canada, the government analyzes the samples; in some states, like New York, state laboratories do it; and in other states, such as California, private laboratories make the analysis. The methods are about the same. Reports go to the racing boards, and the officials decide what steps to take, except in Massachusetts. Here the state does the testing and the racing board hears about it through the court. It is a felony to dope a horse in Massachusetts, and the offender goes to jail for two years for a first offense. A case is not reported unless the proof will stand up in court. After the man has finished his jail sentence, the racing board takes any action it sees fit. This is about the roughest state for the racing dope people.

Detecting the Drugs

Of course I am not concerned with what happens to the man who gets caught; I am just supposed to catch him. Some of the drugs that we look for are: atropine, benzedrine, benadryl, brucine, caffeine, cocaine, codeine, coramine, demerol, ephedrine, metrazol, morphine, novocaine, quinine, scopolomine, sodium barbital, sodium dilantin, strychnine, and theophylline; and there are several more.

The present method of testing is usually as follows: The urine or saliva is concentrated, extracted with alcohol, and acid extracted to leave three concentrates. About four drops in each fraction are left of the whole sample. Six to ten reagents are added to each part, and crystals form. Each drug crystallizes in no more than four different forms, that are characteristic for the drug. Crystals from saliva usually differ from urine crystals. A man has to know these four forms for thirty drugs. Sometimes two crystal tests and a color test are used. A positive is not reported unless it really is a positive.

One test consists of injecting unpurified urine or saliva into a mouse, and watching the mouse to see how it reacts. It is true that some drugs will cause a decided reaction if enough is present, but usually the amount is too small. Also samples may contain impurities that cause a reaction when there is no dope in them. The test is therefore not considered reliable.

Sometimes nearly all the drugs show up. This indicates "Canadian elixir," which con-

tains almost everything. A few drops are supposed to do wonders for your horse.

Many of the older drugs are no longer in use and don't have to be tested for. However, tests for the new drugs are not always as sensitive as for the older ones like strychnine. The people who dope racehorses are well aware of that, and are apparently willing and able to hire high-calibre scientific brains to tell them what they can get away with. It is a race between two groups of scientists, one inventing tests and the other getting around them.

Benzedrine

It is well known to horse operators that nobody detects benzedrine. But tests have now been worked out, which came as a terrific shock to a man in Massachusetts. "I've doped horses in every state in the union," he said, "and I don't see why I'm caught here!" Possibly we were unfair and should have announced that we had new tests and intended to catch him.

The test developed at Harvard uses a spectroscope and ultraviolet light. I have been developing a simple test requiring 50 cc. or less of urine. Extraction with ether and then acid produces a nice red color varying in intensity with the amount of benzedrine present. This test is rapid enough to use at the track, but we haven't actually put it into practice yet. Benzedrine can be detected for 36 hours, so taking the sample at the track isn't necessary.

The usual dose is 200 or 300 mg. It affects respiration and raises blood pressure, so the heart would be strained when racing. Probably this would shorten the horse's useful life.

Doping by Popular Demand

They have a difficult problem in France, because the people seem to think that drugs should be used to put a horse in good condition.

In Mexico, they have just started testing urine, and a chemist told me that out of the first eight samples he got seven positives and a doubtful. He told this story:

The owner of a great favorite was approached by a gambling syndicate and told not to dope his horse, as they were betting on another one. They threatened him with a beating if he doped it. The track officials heard about this, and said: "We hear you're not going to dope your horse. Do you realize how many people are betting on him? Now, you dope him or we'll run you off the track." So he doped the horse, and was badly beaten up, and I never could figure out whether honesty triumphed or not.

Other methods than doping are also used to keep a horse from winning. They say that just giving him a load of cold water will slow him

*Condensed from a talk given before the CSVMA at the Midwinter Conference.

Briefs from Small Animal Practice

By HAROLD H. GROTH, D.V.M.

The daily routine at times is highlighted with the unusual. Recently a case was presented, with the following history: a ten-week-old collie showing considerable distress, emaciation, dehydration, purulent nasal and eye discharge, hemorrhagic diarrhea, vomiting and exhaustion. Casual observance would suggest distemper. However, palpation of the abdomen revealed a long massive object. The diagnosis appeared to be intestinal intussusception. Since the pup was deemed a very poor surgical risk and at the owner's request, euthanasia was performed. Autopsy revealed approximately twelve inches of the lower small intestine telescoped into the large intestine. Gangrene of the affected part and peritonitis were present.

A six-year-old female Doberman Pinscher was presented in a state of extreme dehydration, muscular twitchings, vomiting, hemorrhage from the bowel, subnormal temperature and in a state of coma, exhaustion and weakness. The history revealed the bitch had completed her season about three weeks previously, had been accidentally bred and the owner had administered vaginal douches. For one week prior to my examination, the dog had been treated with oral administration of "large blue tablets." The need for fluids was so apparent that we immediately administered isotonic fluid therapy. Five hundred c.c. were given intravenously and five hundred c.c. subcutaneously. In addition 2 c.c. of adrenal cortex, vitamin B complex, vitamin C were injected. Blankets and heat were applied. Treatment was continued at indicated intervals. A high Penicillin blood level was maintained. Response to the initial treatment was

up. On the dog track it was a well known procedure to give a salty meal to a Greyhound who was winning too often, and then put cool water where he could get it, so he would load up. A fellow was telling me it is much better to put a rock between his toes, or accidentally put him in the starting gate backwards. These are things a bit beyond the chemist.

For Honest Racing

It is the object of our new organization, the Official Association of Racing Chemists, to guarantee racing that is on the level. In many states racing faces banning; and there is much opposition to dog racing. Everything the Association can do to improve the situation will be done.

Personally, I think that the only way to control doping is by simple police methods, because most of it is not done by owners or trainers but by outsiders, although the trainer is responsible.

gratifying. Daily progress was apparent. The patient was able to walk on the third day. Amino acid granules were dissolved in the drinking water. Improvement continued and on the seventh day the bitch was released with instructions regarding diet, vitamins, and care in preparation for a hysterectomy which I felt necessary.

A ten-year-old, spayed female airedale was treated for pustular dermatitis, predominating on the back, around the tail, hind legs, and the skin around the mouth. Anal glands had been expressed at three-week intervals. The contents were extremely purulent in consistency. Frequent clipping and the use of medicinal agents of various kinds were applied to the skin for a period of three months. All the external lymph glands were enlarged and easily palpated. Since no apparent progress was being made in the case it was decided to surgically remove the focal point of infection—the peri-anal glands. Technique described by A. R. Theobald was employed. Post operative treatment consisted of oral sulpha therapy, external use of dermal medication to the existing pustules. Upon examining the dog thirty days after the operation, all previous symptoms had disappeared.

Recently we have been using stainless steel suture material for closing the peritoneal cavity in abdominal surgery such as enterotomies, gastrotomies, hernial reductions, ovario-hysterectomies and allied surgical procedures. Gauges 32 to 36 are employed. A continuous or interrupted suture is used to suture the peritoneum and muscle. This layer is buried and the skin sutured separately. Occasionally, when long incisions are closed an additional layer of suture is applied to bring the fasciae into coaptation. Burying the stainless steel suture may be controversial owing to the fact that we are introducing a foreign body, perhaps causing a fistulous tract. Our results have shown that this procedure is free of complications and advantageous to wound healing.

Veterinary Science 341 A. D.

Mr. Justice Hema H. Basnayake, K. C., Vet. Assoc., Colombo, Sixth Annual General Meeting and Conference, March 28, 1947, Ceylon, said: Veterinary science was not unknown in ancient days and history records more than one king who not only fostered the science but practised it. . . . Buddhadasa (341 A.D.) was a great medical man, skillful both as a physician and surgeon and was no less renowned as a veterinary surgeon. . . . During Parakrama Bahu's time veterinary hospitals were established."—*The Ceylon Journal of Veterinary Science*, Vol. 7.

The next examination in veterinary medicine for a California license will be held January 13, 14 and 15 in San Francisco, Calif.

WHAT FOOT-AND-MOUTH DISEASE LOOKS LIKE

Pictures Show Outward Symptoms—But Accurate Diagnosis
Calls for Veterinary Skill and Experience

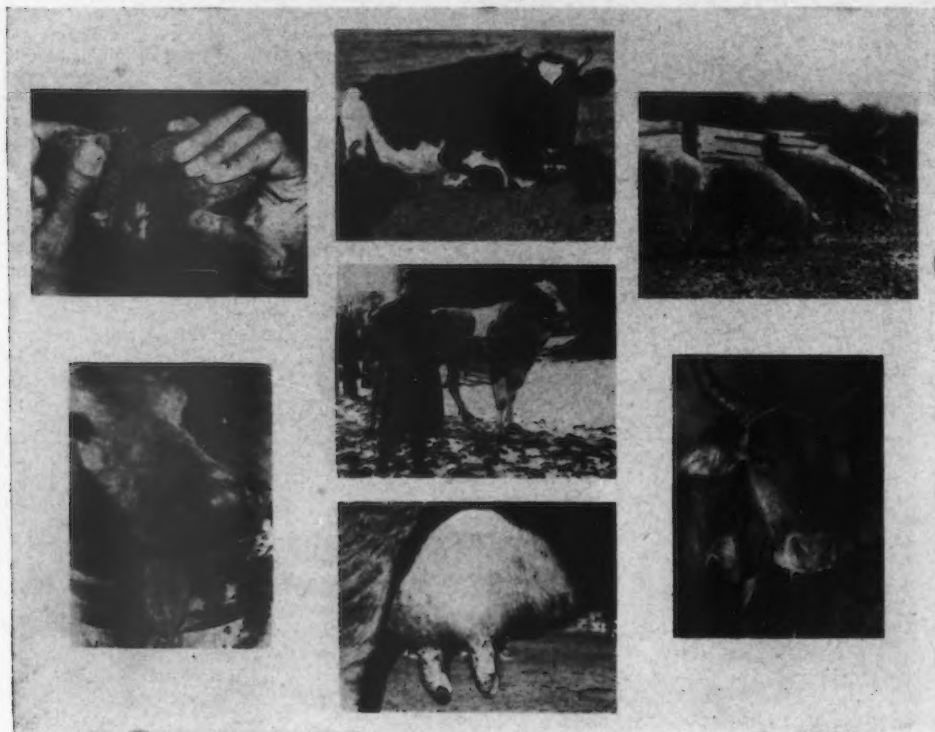
Prompt discovery of foot-and-mouth disease is the basis of its quick eradication, says the Bureau of Animal Industry, U. S. Department of Agriculture. Like a fire, this livestock plague is easiest to stamp out if detected early and control measures are undertaken immediately. So that livestock owners and others may know what this foreign infection looks like and be able to report suspicious cases to veterinary authorities, the Bureau has authorized the publication of a series of pictures of affected animals. Some of the pictures were taken during outbreaks of the disease in the United States. Others were made in central Mexico, where a campaign of

control and eradication is now in progress.

The outward symptoms vary somewhat in different animals, in different outbreaks, and even in different localities during the same outbreak. But the conditions shown in the pictures are fairly typical.

The more common foot symptoms are: Blisters between the toes, lameness in one or more feet, sloughing of the hoof, and pain sufficient to cause affected animals to lie down much of the time. Affected hogs sometimes walk on their knees.

Common mouth symptoms are: Blisters on the lips and tongue, ropy saliva, smacking of the mouth, and evidence of pain when eating.



Common foot symptoms of foot-and-mouth disease include—

- (1) Eroded tissue between the toes,
- (2) Sore feet that cause affected animals to lie down most of the time,
- (3) Sore feet that cause hogs to walk on their knees.

Common mouth symptoms include—

- (4) Blisters on the tongue, which break,

making it painful for the animal to eat,

- (5) Ropy saliva dropping from mouth, in cattle,
- (6) Smacking of lips and accumulations of saliva, in cattle.

Other symptoms include—

- (7) Blisters and erosions on cows' teats, with rapid drop in milk production.

Other symptoms are rapid loss of flesh, reduced milk flow, inflamed udders, blisters on teats, and loss of appetite.

Animals showing such suspicious symptoms, especially if several are similarly affected, should be confined, and the case reported at once to the nearest State or Federal veterinarian. Serious spread of disease is likely to follow the moving or concealment of such animals.

An accurate diagnosis requires veterinary skill and experience, as some less harmful diseases have a few of the same symptoms as foot-and-mouth disease. The two diseases most likely to be confused with it are vesicular stomatitis and vesicular exanthema. Often it is necessary for expert diagnosticians to distinguish between the three by inoculation

tests in which different kinds of animals are used. The virus of foot-and-mouth disease affects cattle, hogs, sheep, goats, and guinea pigs, but not horses. That of vesicular stomatitis affects all those animals, including horses. The virus of vesicular exanthema affects hogs, sometimes horses, but not cattle or guinea pigs. However, only persons with technical knowledge and skill should assume the responsibility of a final diagnosis.

Department veterinary officials emphasize that no known case of foot-and-mouth disease has existed in the United States since the last small outbreak in California in 1929. Publication of pictures of the outward symptoms of the disease, therefore, is purely precautionary as a help to stockmen and others in recognizing the disease more readily if an outbreak should occur in this country.

Joint Statement Between County Agents and Veterinarians

A joint meeting of the Livestock Committee of the National Association of County Agricultural Agents, and the Committee on Public Relations of the American Veterinary Medical Association was held in Amarillo, Texas, on April 28th, 1948, for the purpose of discussing joint problems and improving the relations between the two groups. After full discussion a series of statements were agreed upon unanimously. These are as follows:

1. Surveys carried on by both parties indicate that in a majority of states the relationship between County Agents and practicing veterinarians are good and are improving. However, in a few states relations between the groups are reported by the veterinarians as *indifferent*.

2. It is agreed that both groups are essential to a progressive and successful livestock industry, and that full attainment of the goal of maximum service will only be reached by full cooperation of both groups.

3. Both groups consist of college trained and experienced men. Adequate compensation is necessary to attract good men into these professions, and to retain those who prove to be well adapted to their work. County Agents are full-time employees of the Cooperative Extension Service. Frequently, they are underpaid. This is not good economy and it is recommended that governmental fiscal officers review this situation and make adjustments where needed. The practicing veterinarians must rely solely on private fees, and this point should always be kept in mind when planning cooperative activities.

4. That at all times County Agents and veterinarians should cooperate fully with the maximum effort toward understanding each other's problems, and, in this way, improve the service of both groups to the livestock industry and to promotion of public health.

5. Both County Agents and veterinarians should center maximum efforts aimed at *prevention* of animal and poultry diseases. In such activities the County Agent and veterinarian should act in cooperation and coordination, the County Agent being the channel for publicizing the educational program.

6. In all communities where qualified veterinary service is available, Vocational Agricultural Instructors can be of service to livestock and poultry raisers by advising them to consult a veterinarian whenever animal and poultry diseases are involved.

7. All Vocational Agricultural Instructors should refrain from serving as field agents or usage agents for veterinary biological products.

8. In areas where qualified veterinary service is not available, County Agents can render a public service by helping qualified veterinarians to locate in their community and by giving such newly located veterinarians all possible cooperation and support.

9. That at any time a menacing animal disease is diagnosed in a community, the veterinarian should immediately enlist the fullest day-to-day cooperation of his County Agent.

10. The Joint Committee urgently recommends that County Agents and veterinarians meet at state and county levels and organize their efforts with those of livestock producers and arrange such meetings as they deem necessary to protect the livestock and public health of their communities.

11. The Joint Committee suggests that continued efforts should be made along the lines herewith outlined and that suggestions from individual County Agents and veterinarians are invited by the Joint Committee. This invitation is further extended to all groups or individuals interested in better agriculture.

Associated Serum Producers Sponsor 8-Point Program for 1949

A campaign of public relations for the veterinary profession in eight different phases will be pressed vigorously on a nation-wide scale throughout 1949 by the American Foundation for Animal Health.

The decision to extend the program throughout the coming year was taken at a recent meeting of Associated Serum Producers, whose member companies underwrite the cost of the program and sponsor the American Foundation for Animal Health.

Next year's 8-point program will comprise:

- (1) News releases to nearly 3,000 newspapers;
- (2) Releases to state and national farm publications;
- (3) Illustrated articles and cartoons to 2,600 weekly and rural papers;
- (4) Radio News Service to 400 radio stations;
- (5) Educational messages on "What the Veterinary Profession Means to Mankind" in 13 leading farm magazines;
- (6) Special hog cholera warnings in 15 farm journals;
- (7) A radio campaign urging cholera vaccination, over 19 radio stations;
- (8) Motion picture "Valiant Years" to be booked coast-to-coast throughout 1949, in showings to the general public.

Producing companies who are contributing the funds for the campaign say that this is the broadest program in the history of Associated Serum Producers, who have been conducting this effort for nearly 15 years.

The education of the public on veterinary matters will have several different objectives. One will seek to make animal owners more conscious of disease hazards. Another will show animal owners the importance of correct veterinary diagnosis and treatment and the dollar-and-cents value of relying on the veterinarian for such treatment. Still another phase of the campaign will warn owners of the danger of self-medication and "drug store" diagnosis. A fourth part of the effort will concentrate on the general public, to make everyone more conscious of the importance of veterinary science to the national welfare, and the great service the veterinarian renders in his own community and to the nation as a whole.

The series of messages on "What the Veterinary Profession Means to Mankind" will again stress animal disease hazards, and the importance of veterinary service in helping the owner to avoid losses. Newspaper and farm paper articles and cartoons will also lay major stress on this aspect of veterinary medicine. The radio service, which will go to news editors and farm editors of leading stations throughout the country, will be of a timely nature, dealing with seasonal disease problems and showing the value of the veterinarian in coping with them.

Full details on the campaign in each area may be had by writing American Foundation

for Animal Health, Liberty Building, Des Moines, Iowa.

Members of Associated Serum Producers who have contributed the funds for support of the effort are: Allied Laboratories, Inc.; Blue Cross Serum Co.; Corn Belt Laboratories, Inc.; Fort Dodge Laboratories, Inc.; Grain Belt Supply Co.; Jensen-Salsbery Laboratories, Inc.; Liberty Laboratories; Missouri Valley Serum Co.; Norden Laboratories; Pitman-Moore Co.; Sioux City Serum Co.; Sioux Falls Serum Co.; The Columbus Serum Co.; The Corn States Serum Co.; The Gregory Laboratory; The National Laboratories Corp.; The Royal Serum Co.; The Southwestern Serum Co.; The United Serum Co.

OPPORTUNITIES

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Large Animal Practice Wanted. Lease with option to buy or assist to learn territory. Available for relief work. Reply c/o Secretary.

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Experienced graduate desires to purchase small animal practice. Give complete details in letter. Reply in care of THE CALIFORNIA VETERINARIAN.

Desires Position

Experienced small animal veterinarian available for temporary employment for any period up to April first. Richard M. Scott, 1201 North Orange Grove Avenue, Hollywood.

Veterinarian Wanted

Veterinarian to assist in Small Animal Practice. Address: Groth Animal Hospital, 2600 El Camino Real, San Mateo.

Equipment for Sale

X-Ray, Ritter Model A. Dental X-Ray. Good working condition, \$220. Phone Chestview 1-4225, Dr. H. B. Child, 102 So. Robertson Boulevard, Beverly Hills, Calif.

Will Purchase

Interested in mixed practice partnership or will purchase, contact Secretary's office.

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Secretary-Treasurer, Dr. George E. Martin.
530 Stockton Ave., San Jose.
Executive Committee, Dr. S. T. Michael, Dr. N. E. Clemens.
Meetings second Tuesday of the month.

Central California VMA

President, Dr. Max Coons.
Vice-President, Dr. T. B. Eville.
Secretary-Treasurer, Dr. C. T. Lambert.
Rt. 2, Box 26, Visalia.
Meetings fourth Tuesday of the month.

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5666 Telegraph, Oakland.
Meetings bi-monthly, fourth Wednesday.

Monterey Bay Area VMA

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Vice-President, Dr. George Freilermuth.
Secretary-Treasurer, Dr. C. E. Taylor.
Executive Committee, Dr. John E. Craige, Dr. L. E. Chaney.
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Vice-President, Dr. L. D. Meyers.
Secretary-Treasurer, Dr. I. N. Bohlender.
Box 588, Turlock.
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Meetings, fourth Wednesday of the month.

Orange Belt VMA

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Vice-President, Dr. Robert Philbrick.
Secretary-Treasurer, Dr. James R. Ketchersid.
616 East Highland Ave., San Bernardino.

Peninsula VMA

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Secretary-Treasurer, Dr. E. W. Paul.
Box 866, Redwood City.
Meetings, third Monday.

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President, Dr. H. W. Campbell.
Vice-President, Dr. R. P. Gobler.
Secretary-Treasurer, Dr. Ben Burdo, P. O. Box 7, Sebastopol.
Meetings, second Thursday of every other month (odd no. months).

Sacramento Valley VMA

President, Dr. Philip A. Lee.
Vice-President, Dr. Charles W. Riggs.
Secretary-Treasurer, Dr. Paul D. DeLay, Animal Pathology Laboratory, State Office Building No. 1, Sacramento.
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Vice-President, Dr. W. W. Myers.
Chairman Executive Committee, Dr. F. D. McKenney.
Secretary-Treasurer, Dr. Mitchell Smith.
3740 Rosecrans Blvd., San Diego.
Meetings, third Tuesday of the month.

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President, Dr. M. A. Northrup.
Vice-President, Dr. T. M. McIntyre.
Secretary-Treasurer, Dr. H. F. Carroll.
2024 Lombard St., San Francisco 2.
No regular dates.

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President, Dr. W. K. Riddell.
Vice-President, Dr. A. Mack Scott.
Secretary-Treasurer, Dr. H. I. Ott.
10326 E. Artesia, Bellflower.
Meetings, third Wednesday of the month.

Tri-Counties VMA

President, Dr. Alfred E. White, Jr.
Secretary-Treasurer, Dr. Ronald Williams.
930 Coast Highway, Santa Barbara.
No regular dates.

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E. F. Sheffield, 3895 Pacific Highway, San Diego.
C. E. Wickett, 203 Administration Bldg., Union Stock Yards, Los Angeles.

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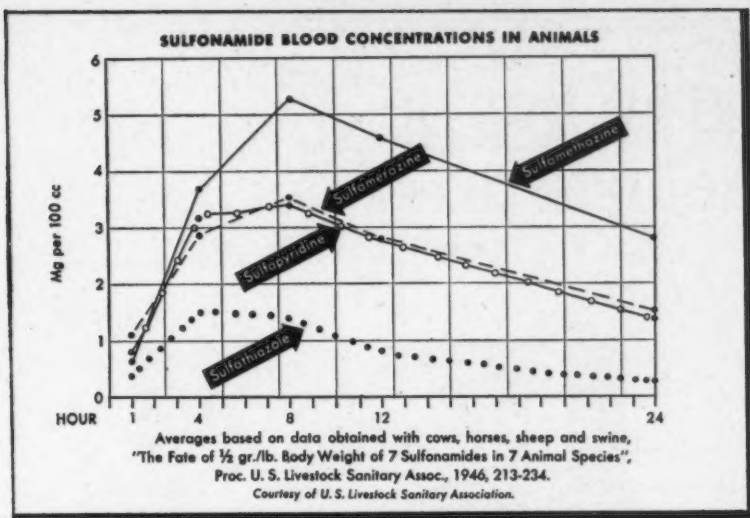
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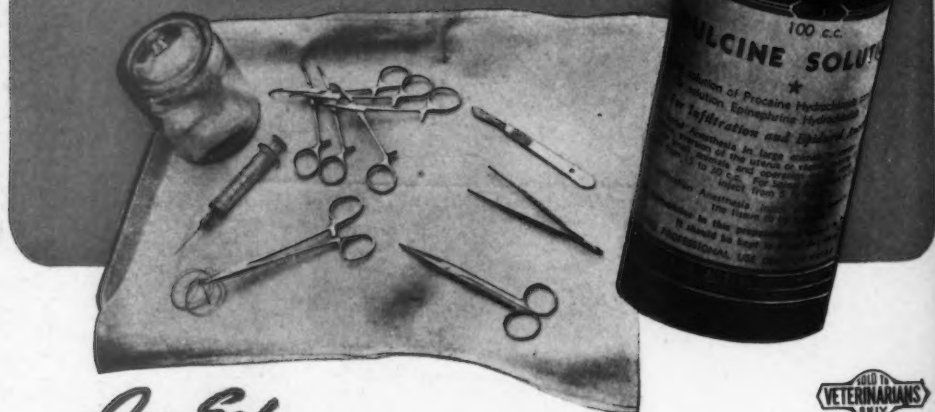
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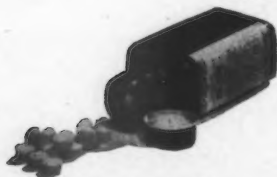
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